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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/844,075

04/30/2001

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EXAMINER

LE, VIET Q

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/844,075

Applicant(s)

GOKHALE ET AL.

Examiner

Viet Q. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-25 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

Reference characters "4" and "2" have both been used to designate the earth station antenna in Fig. 1.

Reference characters "4" and "2" have both been used to designate the terrestrial ATM network in Fig. 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "4" has been used to designate both the earth station antenna and the terrestrial network.

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The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "2" has also been used to designate both the earth station antenna and the terrestrial network.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Claim number 4 is missing.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Wright et al. (U.S. 6,512,749), herein after referred to as Wright.

Regarding claim 1, Wright disclosed a communication system comprising of: a satellite communication network (See Fig. 1, block 100), a terrestrial communication network (See Fig. 1, block 408), a gateway connecting the satellite communication network and the terrestrial communication network (See Fig. 1, block 400), said gateway comprising of: an ATM switching unit (See Fig. 1, block 402) for providing an interface with the terrestrial communication network, a satellite Modem (See Fig. 404) for communicating with the satellite network, and an inter-working unit (See Fig. 1, block 410 & 402) interposed between the switching unit and the satellite MODEM for providing seamless integration between the terrestrial communication network and the satellite communication network by providing traffic and resource management functions, signaling inter-working functions, and satellite domain specific functions. (See Fig. 1, block 400; see column 3, lines 50-67; columns 4-6)

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wright in view of Luoras (U.S. 6,445,707).

Regarding claims 2, Wright disclosed a communication system comprising of: a satellite communication network, a terrestrial communication network, a gateway connecting the satellite communication network and the terrestrial communication network, said gateway comprising of an ATM switching unit, a satellite Modem, and an inter-working unit as represented by the user device interface and the AAL/ATM unit. (See Fig. 1, block 400; see column 3, lines 50-67; columns 4-6)

Wright, however, fails to expressly disclose the congestion control unit inside the inter-working unit.

Luoras teaches the congestion control unit to perform congestion control between the satellite network and the terrestrial network. (See Fig. 3, block 40; Fig. 3, block 38; See column 13, lines 60-65; column 14, lines 45-46).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wright's inter-working unit to incorporate the congestion

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control unit, the motivation being that congestion control unit will perform congestion control between the satellite network and the terrestrial network to fully utilize the link bandwidth between the 2 networks.

8. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wright in view of Prieto (U.S. 6,621,801).

Regarding claim 3, Wright disclosed a communication system comprising of: a satellite communication network, a terrestrial communication network, a gateway connecting the satellite communication network and the terrestrial communication network, an ATM switching unit, a satellite Modem, and a inter-working unit like the user device interface and the AAL/ATM unit. (See Fig. 1, block 400; see column 3, lines 50-67; columns 4-6)

Wright, however, fails to expressly disclose the DAMA (demand assigned multiple access) unit inside the inter-working unit.

Prieto teaches the distributed control DAMA (demand assigned multiple access) methodology for allocating satellite bandwidth on demand to the gateway (See Fig. 1-4; See columns 3-10).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wright's inter-working unit to incorporate the DAMA unit, the motivation being that DAMA unit will perform allocating satellite bandwidth on demand to the gateway.

9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wright in view of Mirek (U.S. 5878032) and in further view of Murata (U.S. 6,470,004).

Regarding claim 5, Wright disclosed a communication system comprising of: a satellite communication network, a terrestrial communication network, a gateway connecting the satellite communication network and the terrestrial communication network, an ATM switching unit, a satellite Modem, and a inter-working unit like the user device interface and the AAL/ATM unit. (See Fig. 1, block 400; see column 3, lines 50-67; columns 4-6)

Wright, however, fails to expressly disclose the cell delay variation removal unit inside the inter-working unit.

Mirek addressed problems with different known delay problems in the ATM network like the cell delay variation (CDV) and the needs to monitor and remove cell delay variation (CDV) (See column 4, lines 36-50).

Murata discloses the ATM cell delay variation processing units to perform cell delay variation on incoming data. (See Fig. 4, blocks 14 and 16; See column 5, lines 37-67; see column 6, lines 1-67).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wright's inter-working unit to incorporate the cell delay variation removal unit, the motivation being that CDV removal unit will reduce cell delay variation on incoming data from the satellite network.

10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wright in view of Marvin (U.S. 4318126).

Regarding claim 6, Wright disclosed a communication system comprising of: a satellite communication network, a terrestrial communication network, a gateway

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connecting the satellite communication network and the terrestrial communication network, an ATM switching unit, a satellite Modem, and a inter-working unit like the user device interface and the AAL/ATM unit. (See Fig. 1, block 400; see column 3, lines 50-67; columns 4-6)

Wright, however, fails to expressly disclose the encryption and decryption unit inside the inter-working unit.

Marvin disclosed the use of encryption / decryption used to provide security on channels that need to be secured and only recovered using keys to decrypt the signals. (See column 7, lines 10-14).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wright's inter-working unit to incorporate the encryption/decryptions unit, the motivation being that CDV encryption/decryption unit will provide security to data transmitted to the satellite network.

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wright in view of Jaime (U.S. 6,449,265).

Regarding claim 7, Wright disclosed a communication system comprising of: a satellite communication network, a terrestrial communication network, a gateway connecting the satellite communication network and the terrestrial communication network, an ATM switching unit, a satellite Modem, and a inter-working unit like the user device interface and the AAL/ATM unit. (See Fig. 1, block 400; see column 3, lines 50-67; columns 4-6)

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Wright, however, fails to expressly disclose the signal inter-working unit inside the inter-working unit.

Jaime discloses a mapping scheme that maps standard ATMs service classes of the type used in a wired communications network into one of a plurality of available media access control channels that allow the particular ATM service class to be transmitted efficiently over the network, such as a satellite network. (See Fig. 1; see column 3, lines 10-60)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Wright's inter-working unit to incorporate the signal inter-working unit, the motivation being that the signal inter-working unit will provide protocol conversion between the terrestrial network and the satellite network.

Allowable Subject Matter

12. Claims 8-25 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The reason for allowing claim 8 is the examiner could not find any previous art that disclosed an apparatus combining all features of the invention into one unit like: the congestion control unit, the DAMA (demand assigned multiple access) control unit, cell delay variation removal unit, data encryption and decryption unit, signal inter-working unit.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) Yasukazu Murata (U.S. 6,470,004), wireless asynchronous transfer mode (ATM) communication system.
- b) Takeshi Mio et al. (U.S. 6,738,347), rate control communication apparatus and method.
- c) Joseph Bryan et al. (U.S. 6,563,829), method for providing integrated packet services over a shared media network.
- d) Aaron D. Falk et al. (U.S. 6,580,716), distributed ATM switching and method for performing switching in an ATM network that includes a processing satellite.
- e) Colin J. Black et al. (U.S. 6,377,561), data communication satellite system and method of carrying multi-media traffic.
- f) Lars-Goran Petersen et al. (U.S. 6,504,845) centralized queuing for ATM node.
- g) Keith McCloghrie et al. (U.S. 6,286,052), method and apparatus for identifying network data traffic flows and for applying quality of service treatments to the flows.
- h) Jaime I. Prieto et al. (U.S. 6,381,228), onboard control of demand assigned multiple access protocol for satellite ATM networks.

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- i) Burt Liebowitz et al. (U.S. 5,812,545), full mesh satellite based multi-media networking system.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Le whose telephone number is 571-272-2246.

The examiner can normally be reached on 8 AM -5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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